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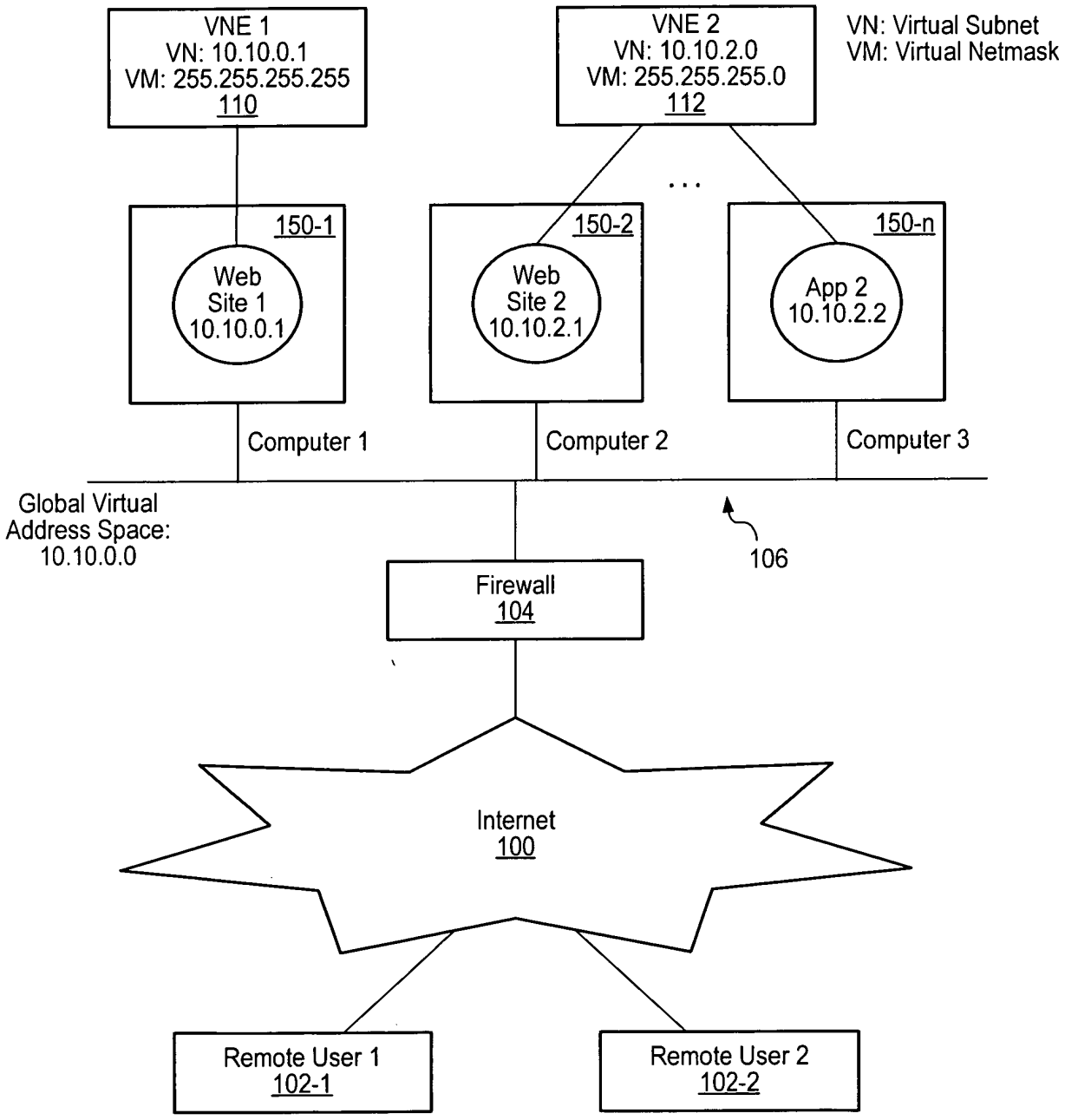

The above diagram illustrates the virtual network environments. Virtual Network Environment 1 contains one application WEB SITE 1, is defined by the Virtual Network Address 10.10.0.1 resides solely on computer 1. Virtual Network Environment 2 contains two applications, WEB SITE 2 and APP 2, and spans two computers, Computer 2 and Computer 3. The virtual network of VNE 2 is 10.10.2.0.

Fig. 1

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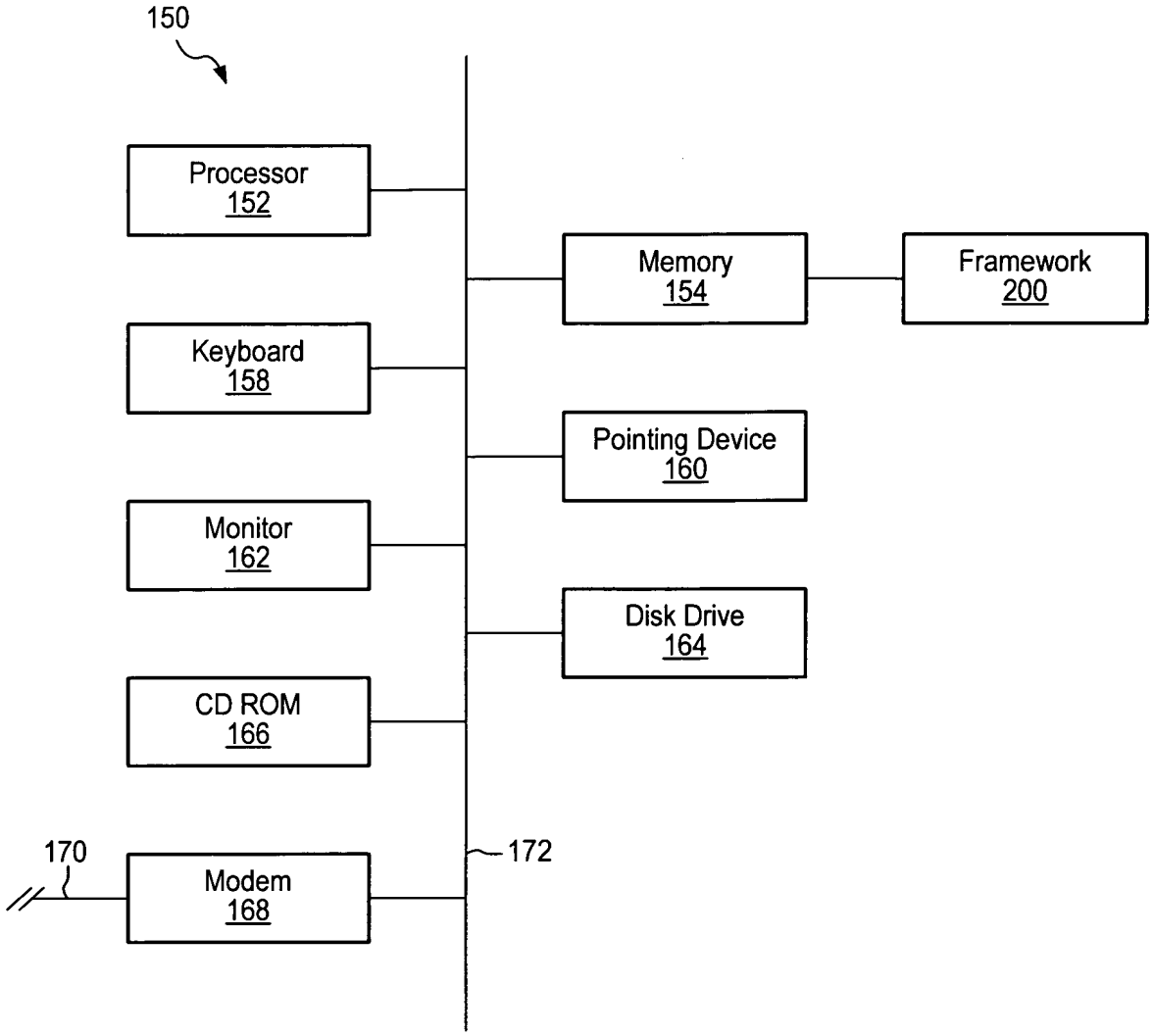

Fig. 2

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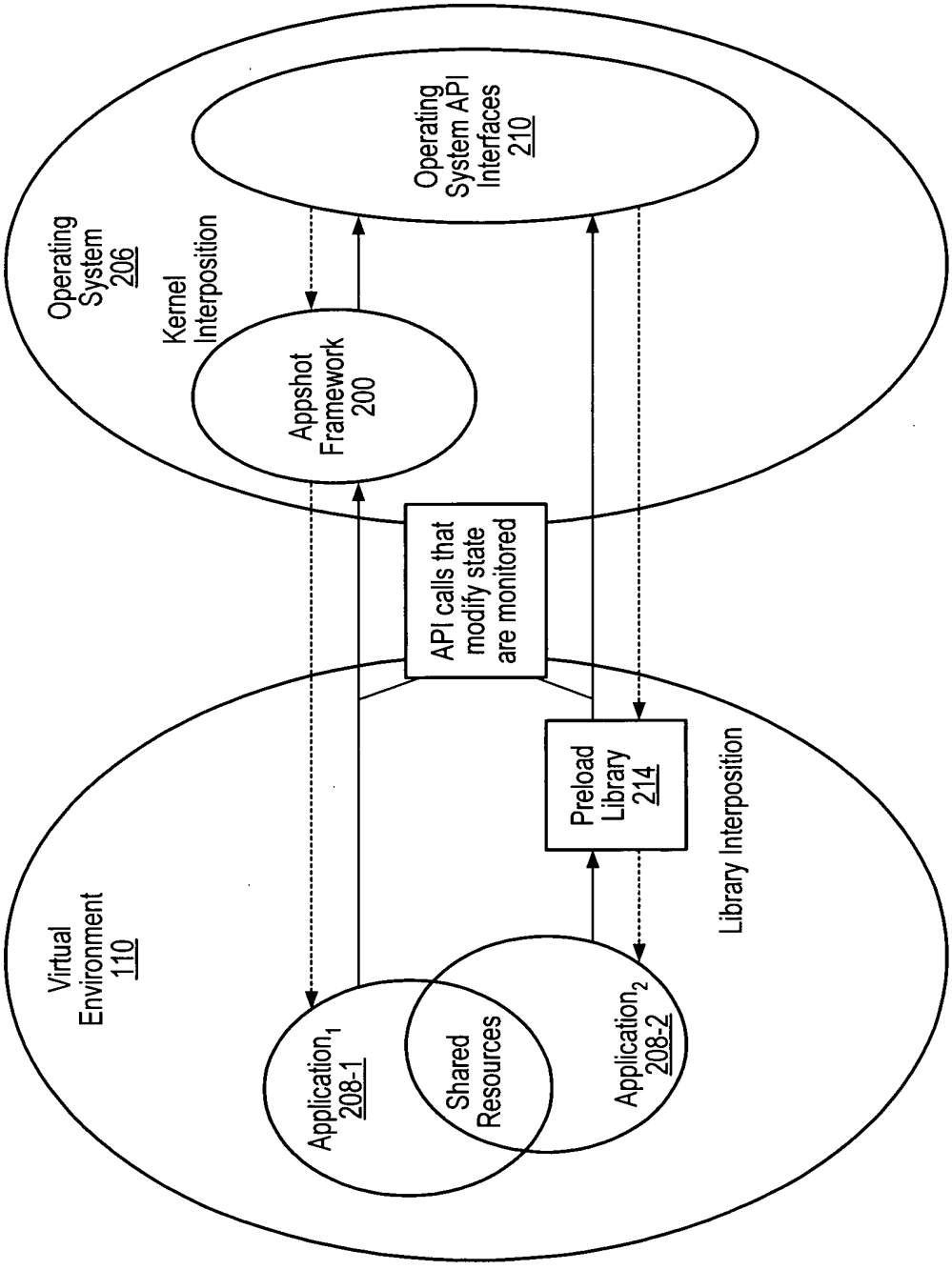

Fig. 3

Tracking application state via library and kernel interposition.

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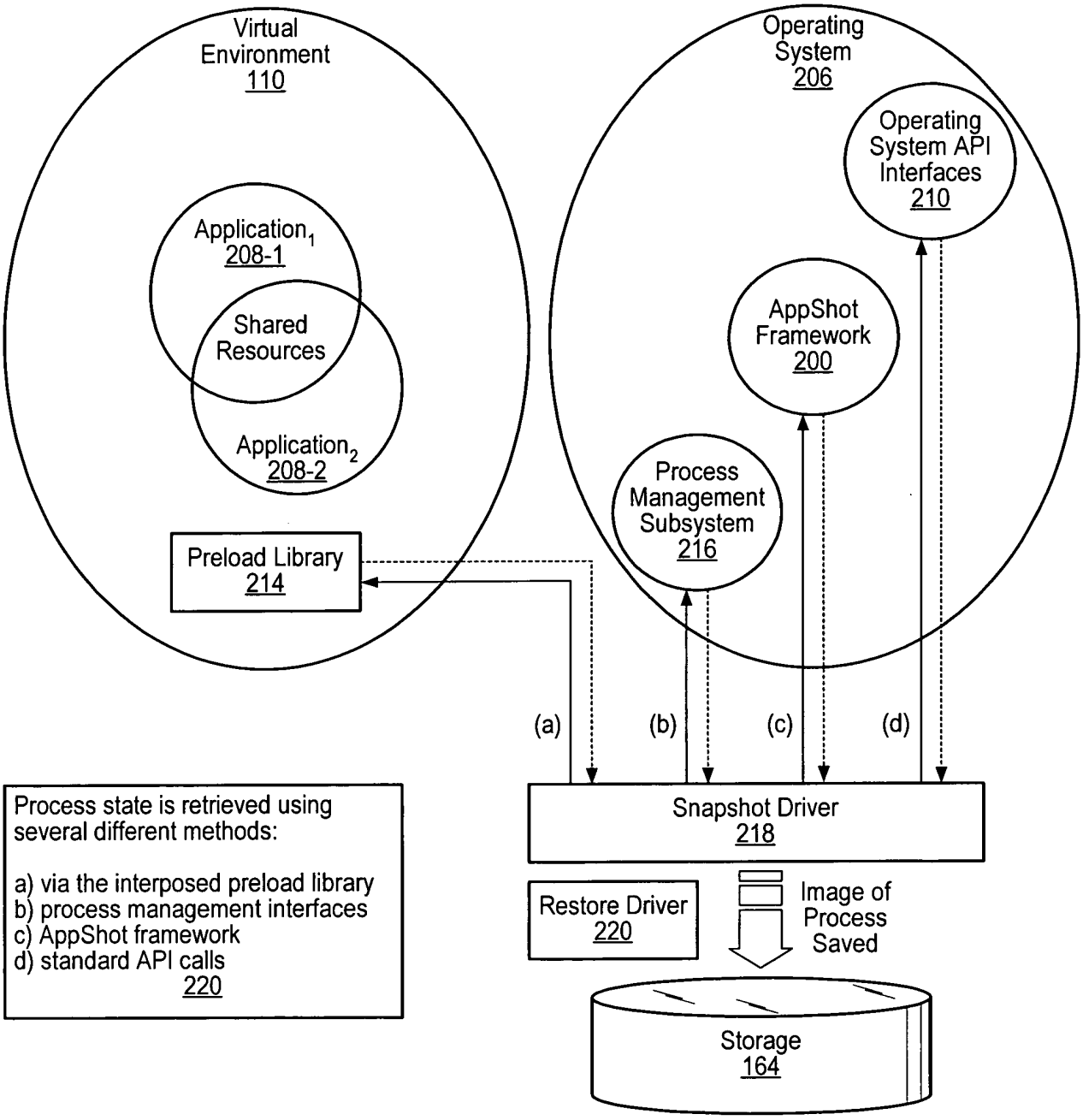

Capture of an application's run-time state.

Fig. 4

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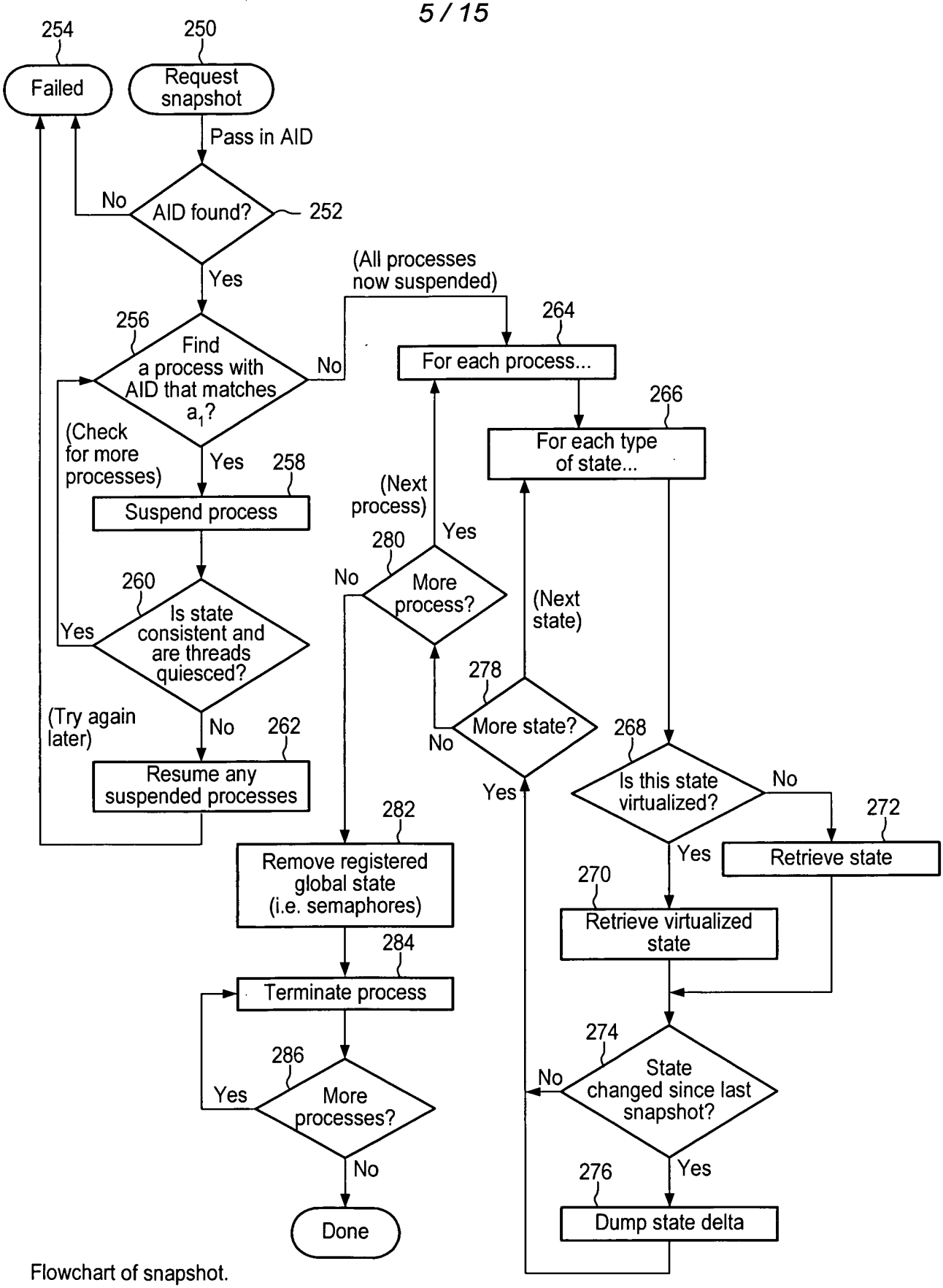

Flowchart of snapshot.

Fig. 5

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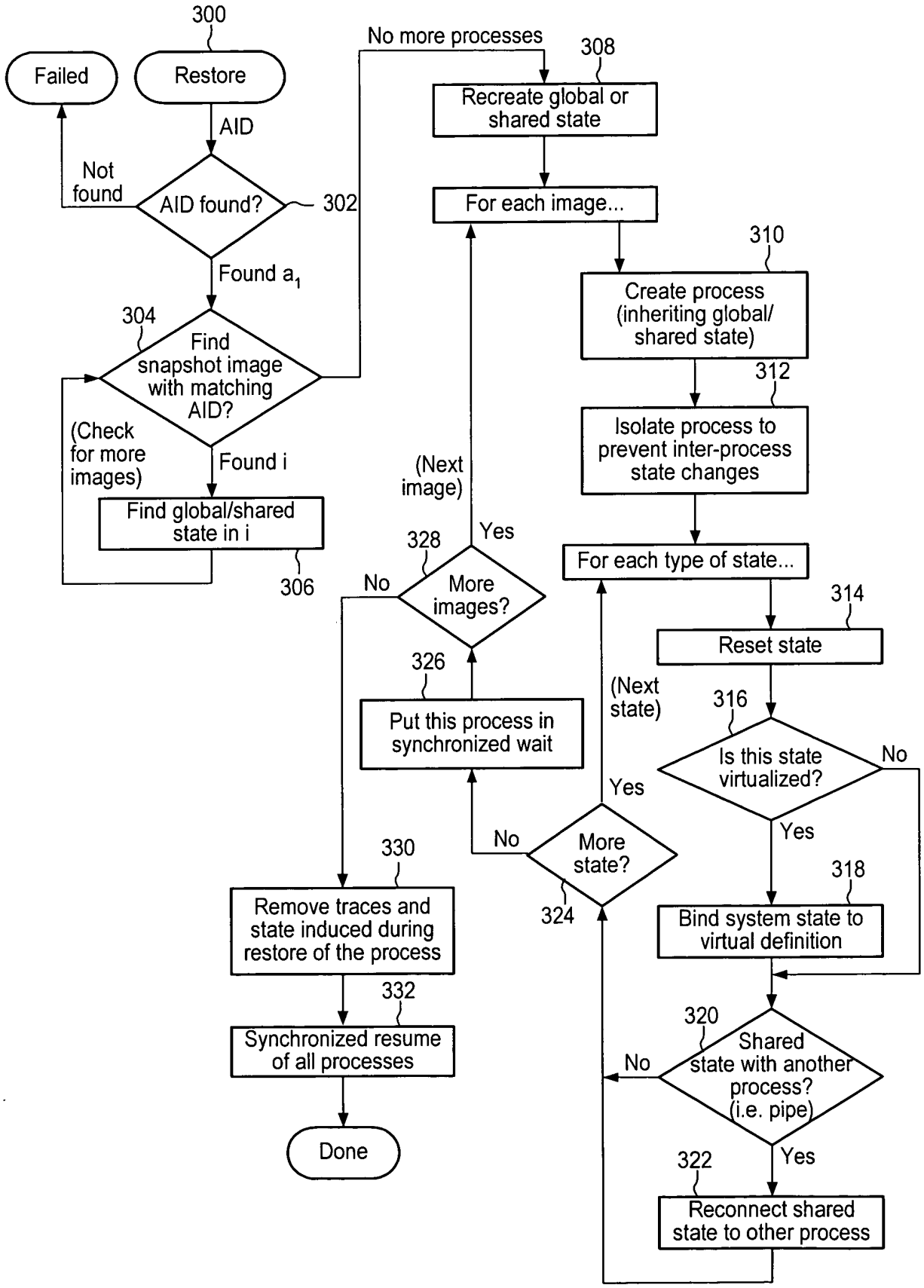

Fig. 6

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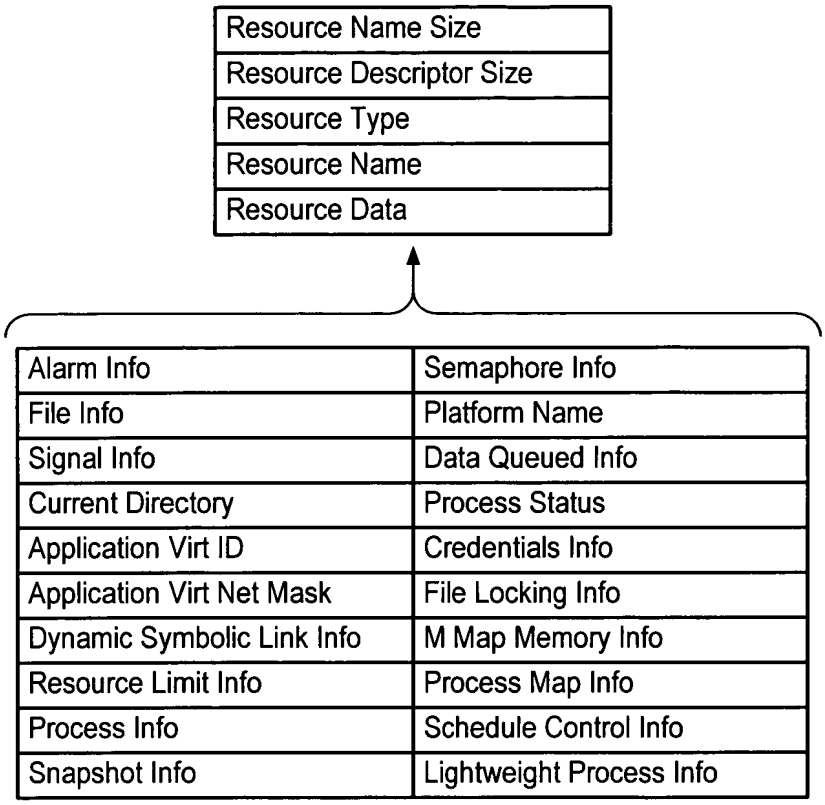

Fig. 7

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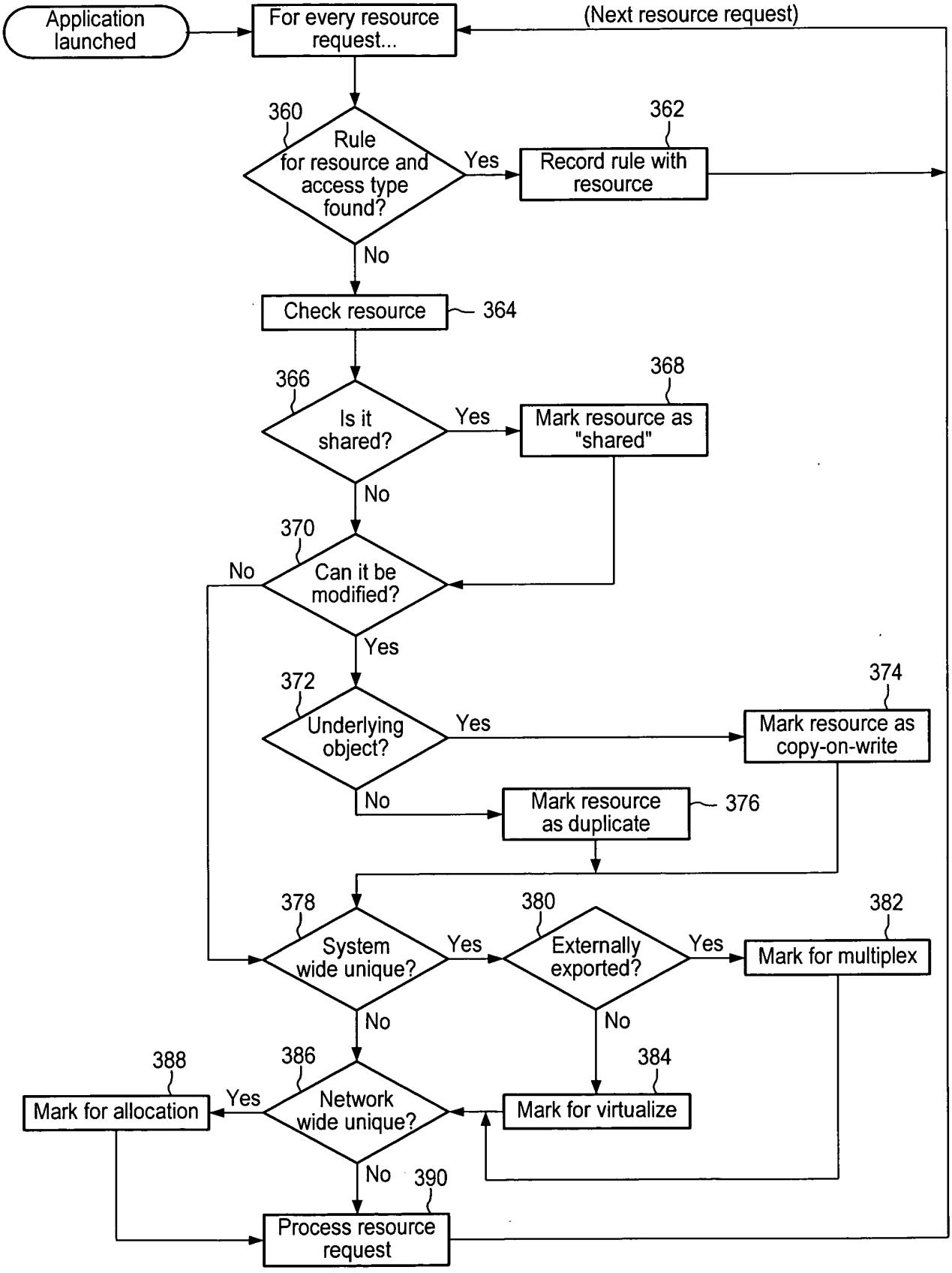

Fig. 8

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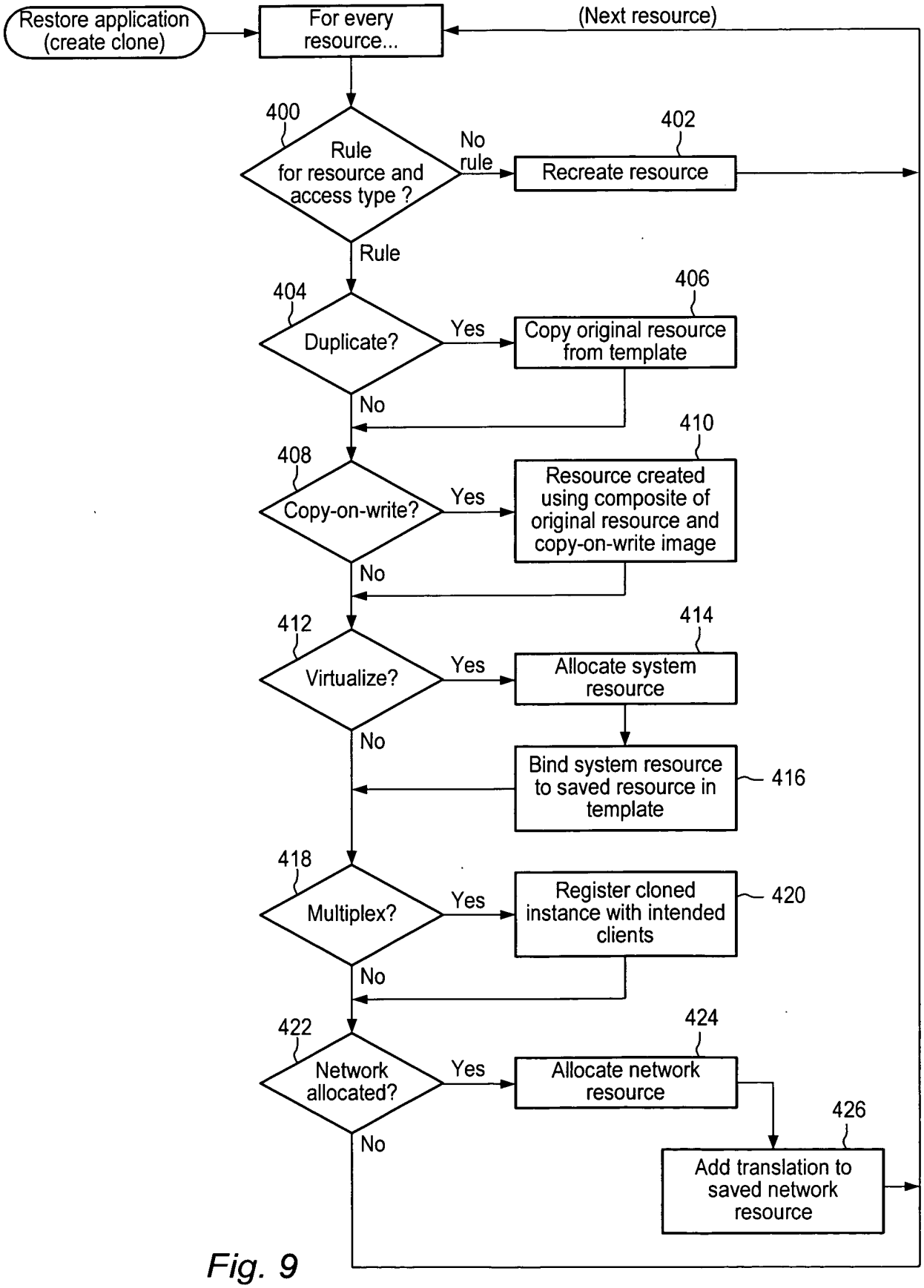

Fig. 9

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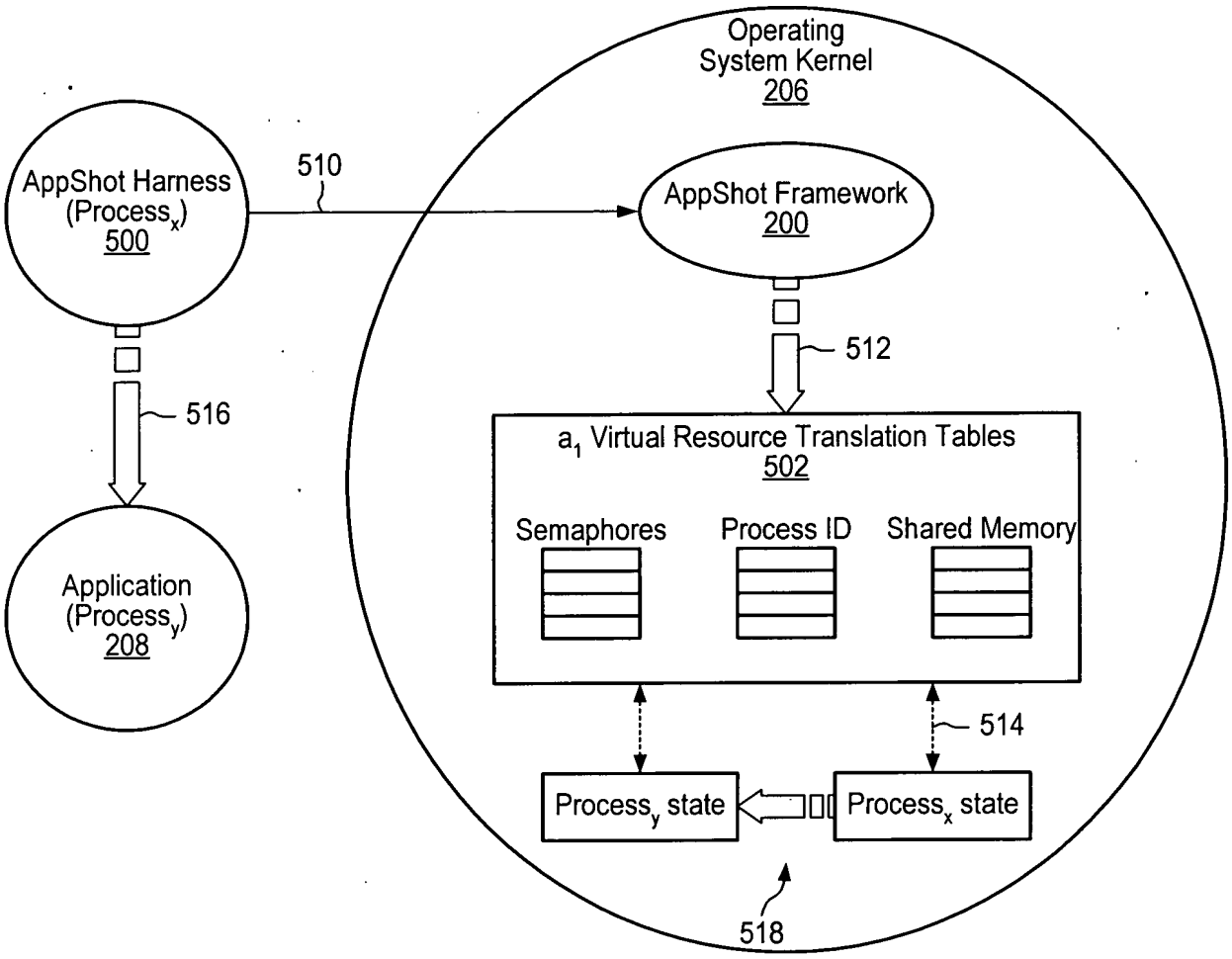

Registration of an application using virtual resource ID's

Fig. 10

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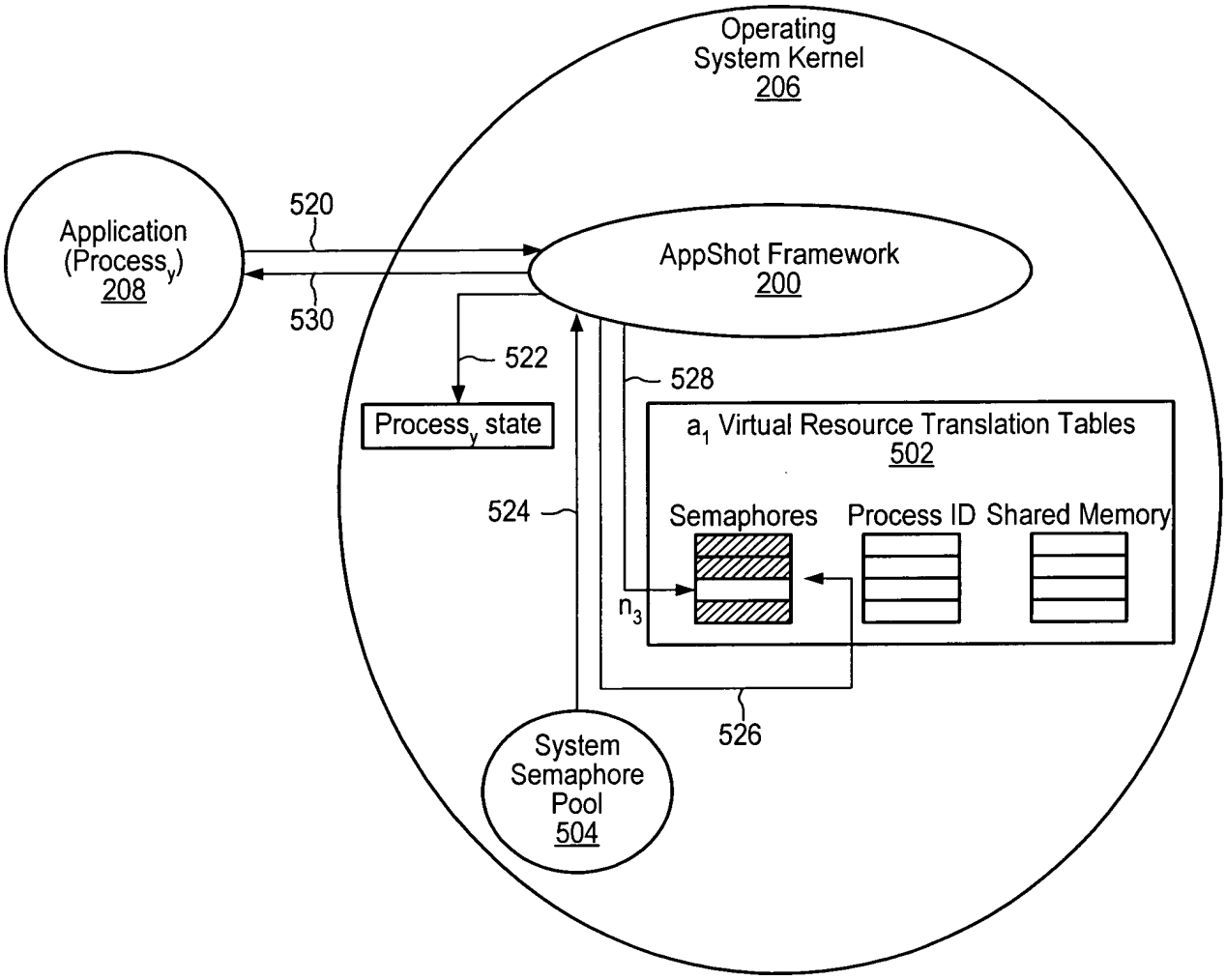

Allocation of a virtual resource (i.e. semaphore)

Fig. 11

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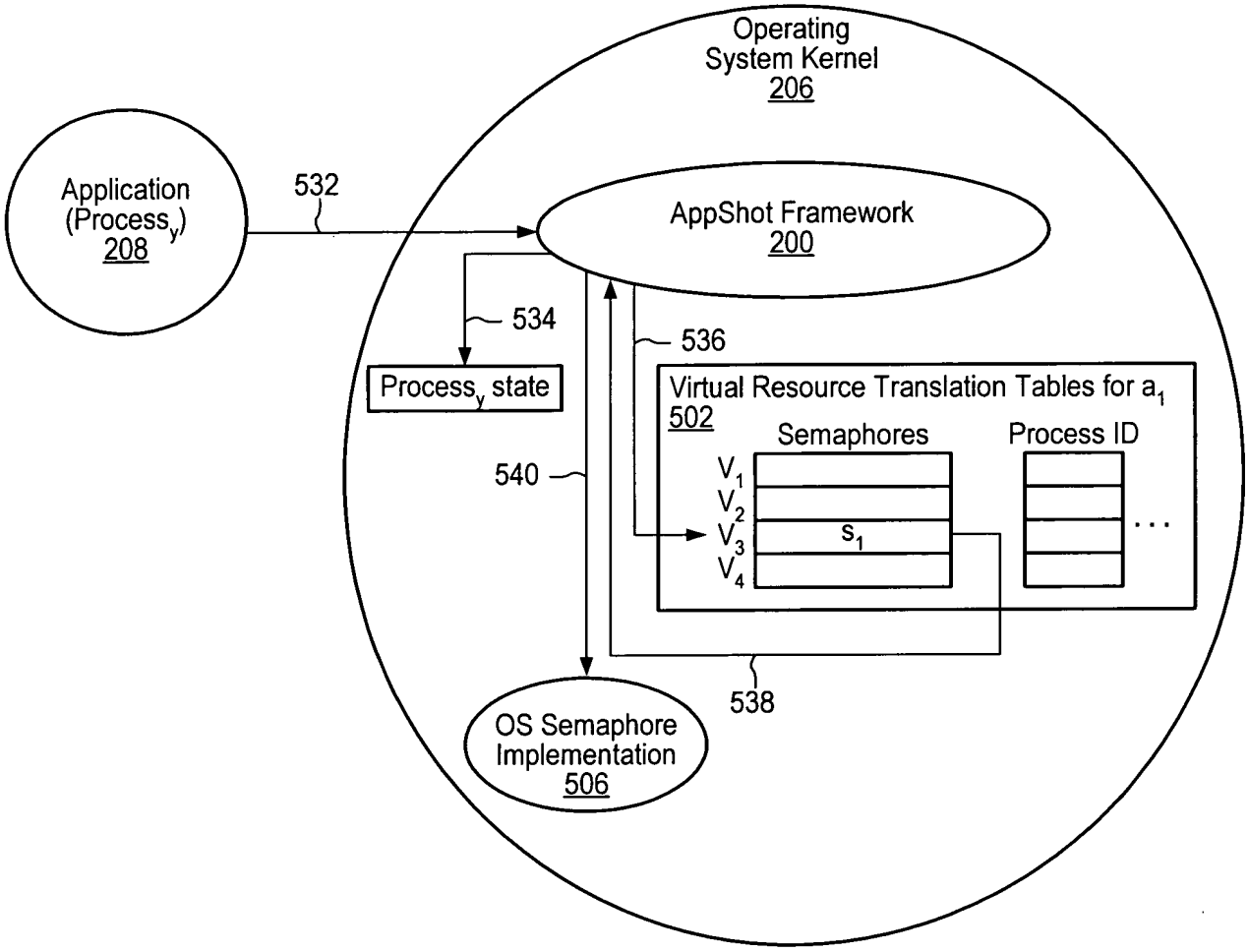

Translation of a virtual resource (i.e. semaphore), virtual to system

Fig. 12

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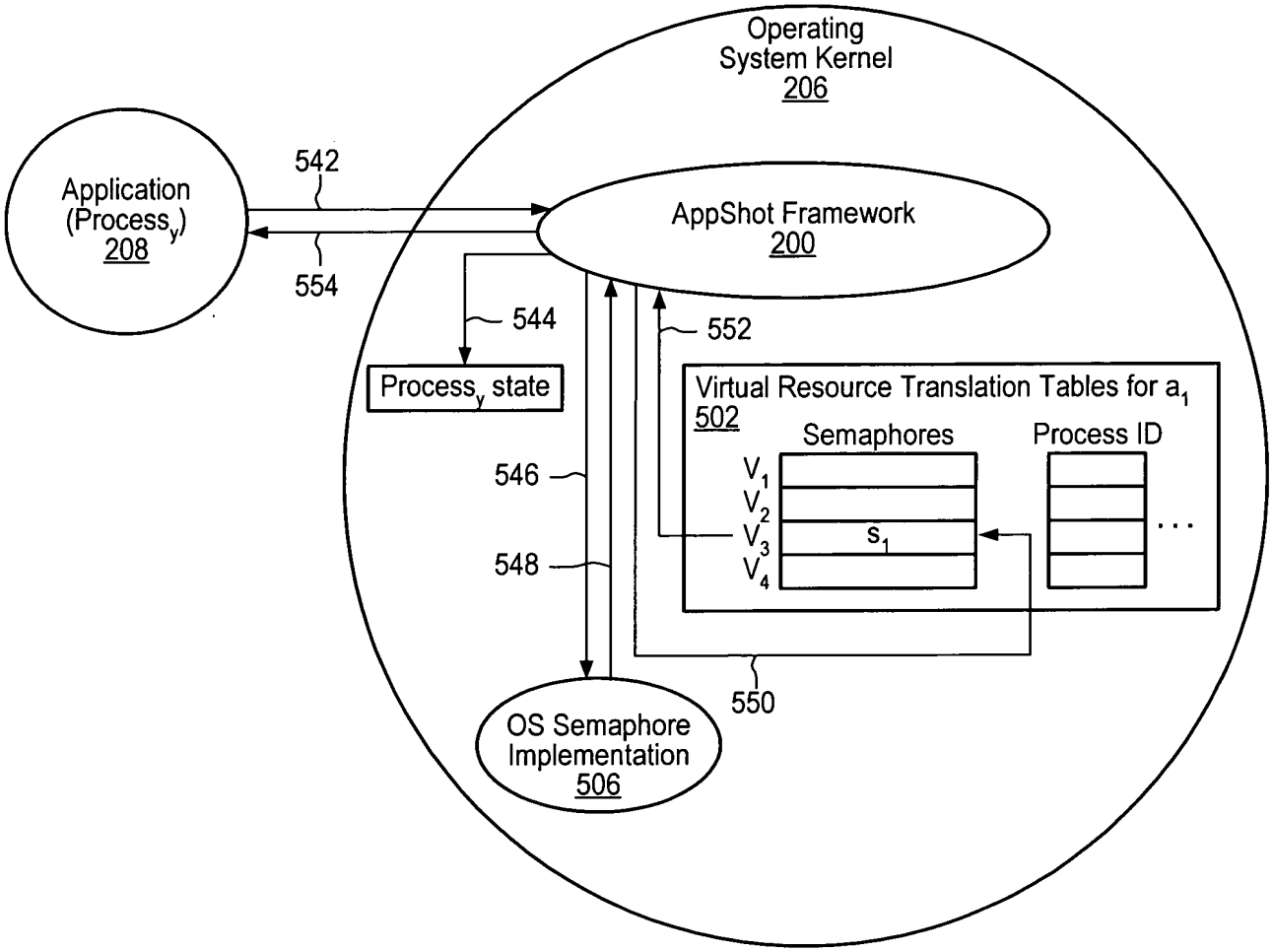

Translation of a virtual resource (i.e. semaphore), system to virtual

Fig. 13

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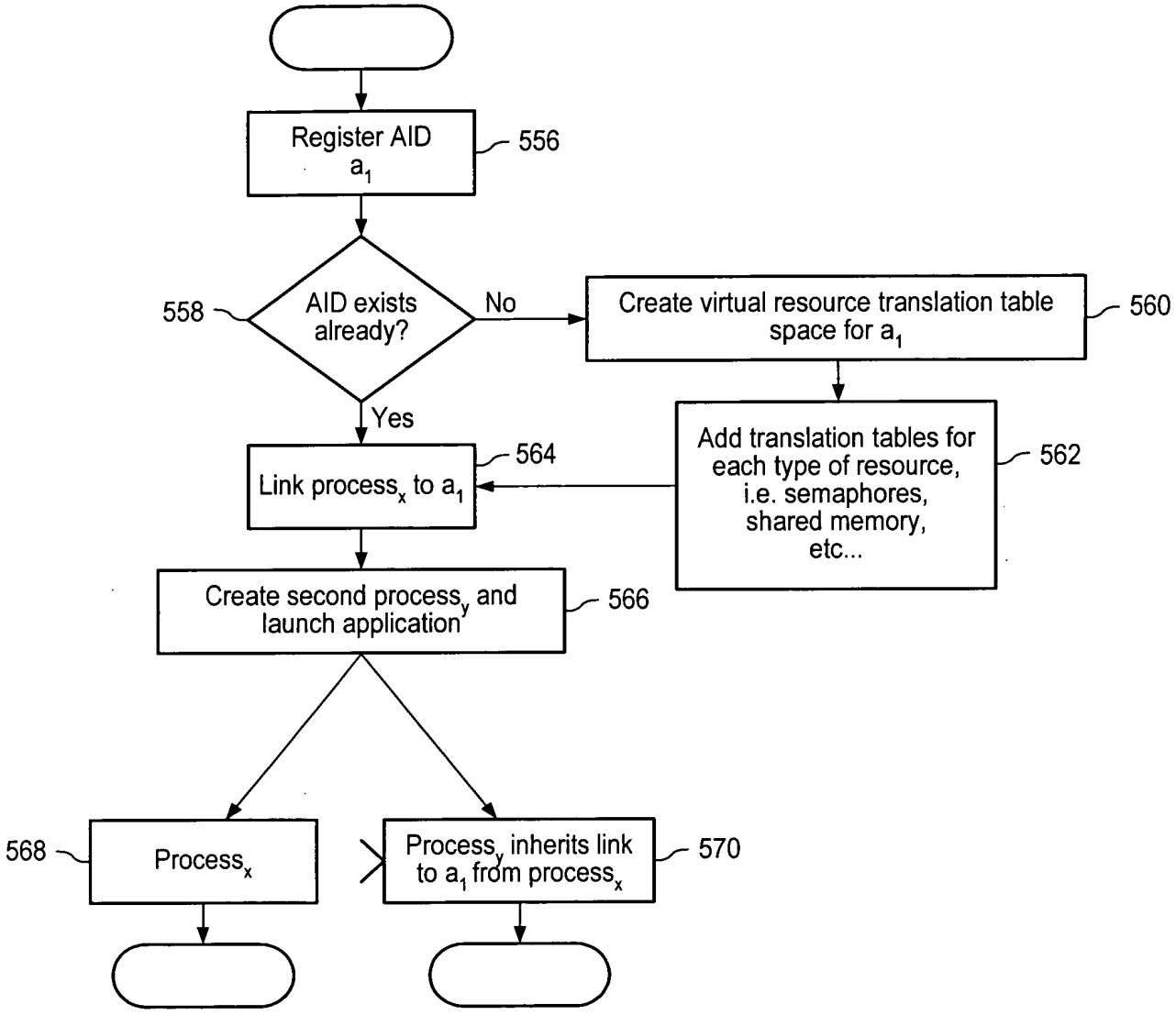

Flowchart describing creation of virtual translation tables

Fig. 14

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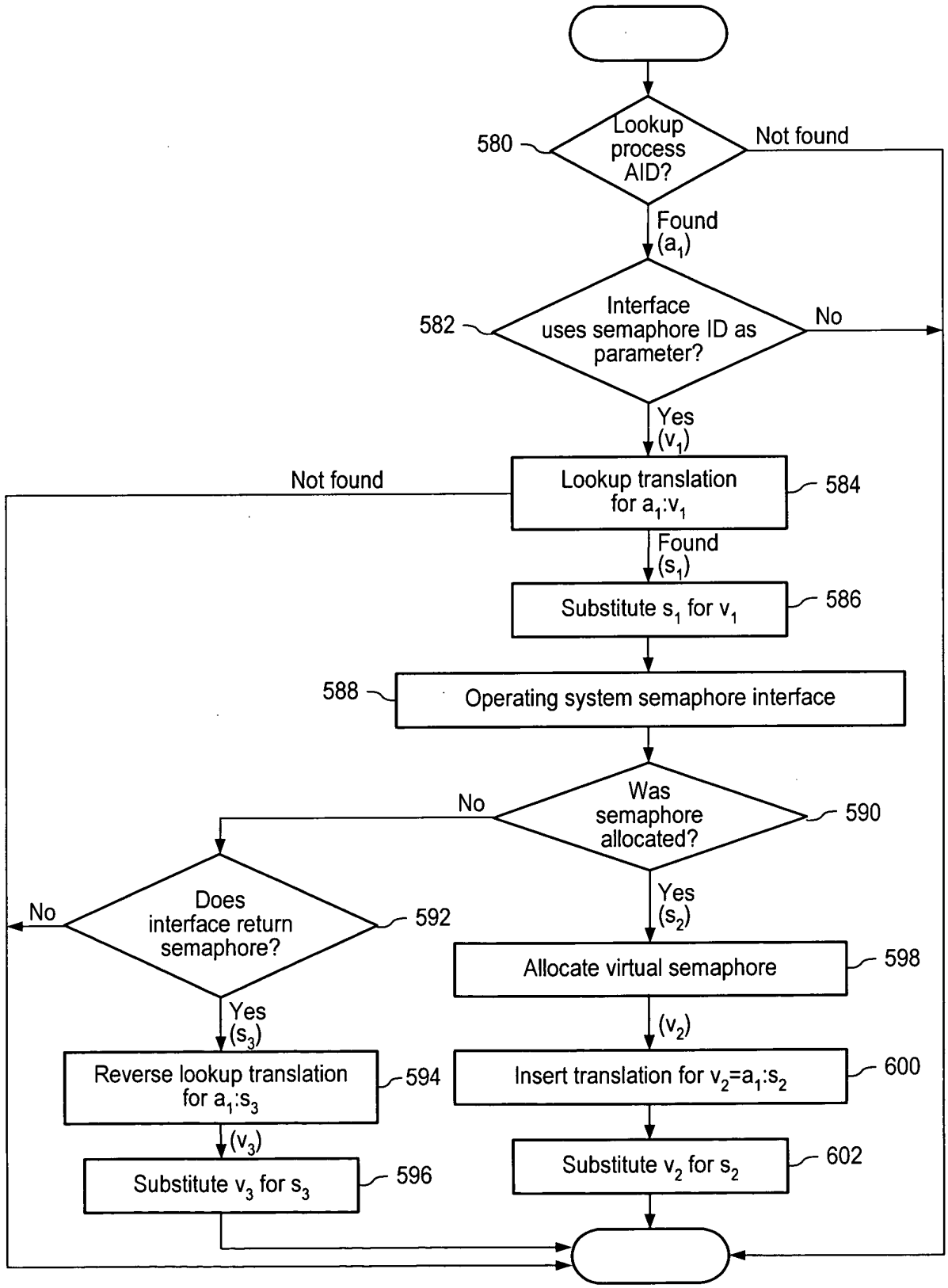

Flowchart depicting translation of a virtual resource (i.e. semaphore)

Fig. 15